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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,818	02/19/2002	David Arthur Grosvenor	30003580-2	7126

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

NGUYEN, KIMBINH T

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,818

Applicant(s)

GROSVENOR ET AL. 

Examiner

Kimbhinh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-15 and 20-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-22, 25-28 and 30-36 is/are rejected.
- 7) ☒ Claim(s) 23, 24 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/10/04 has been entered.
2. This action is responsive to amendment filed 5/10/04.
3. Claims 3-15, 20-36 are pending in the application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9, 15, 20, 21, 27, 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (6,587,119) in view of Martin et al. (6,256,061).

Claim 9, Anderson et al. discloses a method for displaying a digital image (col. 2, lines 56-57; lines 65-67), comprising: acquiring a set of image data of displayable static image (digital still image; col. 4, lines 62-64); using a processing means (using CPU 344 to control various processes of camera 110; the captured images are processed in the

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background; CPU 244 run a operating apparatus that includes a menu-driven GUI and provide image processing through software; col. 3, lines 20-36) to perform an analysis of the image data to identify characteristics of the image content (multiple images, a panorama image, a burst image, a time lapse image. A panorama image comprises overlapping images of a larger scene; col. 4, line 63 through col. 5, line 5) to determine which number of predefined image characteristics are present in the image; identifying a predefined image class, in that there is dominant edge, line or curve (panning path, a curve fitting function (col. 8, lines 42-49; figs. 9G, 9H); Anderson a display path following the at least one dominant edge, line or curve (panning and zooming path between two key frames; col. 8, lines 43-49); Anderson does not teach executing an algorithm; however, Martin teaches executing an algorithm for determining a display path (executing image transform processes for processing the selected image portions in a continuous sequence controlled by instructions; col. 10, lines 24-27); executing an algorithm (the ASCII command file or command sequencing data file; col. 3, line 63 64; col. 4, lines 4-13) associated with characteristics identified, the algorithm defining rules(instructions or command) for generating a moving object over the image (col. 9, lines 35-47); and Anderson teaches generating a set of video data (col. 2, lines 57-67), a set of video data for output to a display device (LCD) connected to the CPU (col. 3, lines 13-44), the video data representing displayable motion over the static image and generating in accordance with the image content characteristics (col. 5, lines 6-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an algorithm which defines the rules as taught by Martin into a

digital imaging device of Anderson's method for analyzing a still image during interactive movie creation, because it would provide video-motion rate images via low bandwidth digital transmissions from a still image taken (see abstract).

Claim 15, the rationale provided in the rejection of claim 1 is incorporated herein. In addition, Anderson teaches a computer readable medium (col. 3, lines 45-51).

Claim 20, the rationale provided in the rejection of claim 15 is incorporated here in. In addition, Anderson teaches a data port that receives image data of a displayable static image; a processor (microprocessor), a data port (input/output) and video port (camera) the processor receives image data (input), performs identifying characteristics of the image content (col. 4, lines 64-67), generating and output the video data (col. 2, lines 57-67).

Claim 21, the rationale provided in the rejection of claim 15 is incorporated herein. In addition, Anderson et al. teaches determining a display path moving between each index frame, the display path following the determined order of display (a path of panning and zooming across the image is determined; col. 5, lines 42-52; fig. 4B is a diagram illustrating an example path of panning across image shown by the arrows).

Claim 27, Anderson et al. teaches panning the one side of the static image to the other side of the static image (fig. 4B is a diagram illustrating an example path of panning across image shown by arrows; col. 5, lines 45-47).

Claim 34, Anderson et al. teaches determining the display path by moving between a center of each index frame (col. 6, lines 60-67).

Claim 35, Anderson et al. teaches determining a point on a person (the arrows shown in fig. 4B) shown in index frames; determining the display path by moving between the determined points (the path of panning across image shown by arrows; col. 5, lines 42-52).

6. Claims 3, 10, 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (6,587,119) in view of Martin et al. (6,256,061), and further in view of Lau et al. (6,633,309).

Claim 3, Anderson does not teach sub-parts of the image; however, Lau et al. discloses identifying a predefined image class (col. 5, lines 52-60), in that image class, sub-parts of the image (sub-objects) have predefined characteristics (col. 10, lines 47-50), establishing index frames based on a close-up view of sub-part (col. 2, lines 15-22), executing an algorithm (a software program) to determine a display path from one to index frame to the next (col. 5, lines 25-31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the identifying a predefined image, viewing a close-up image as taught by Lau into a method of defining the position of the key frames on the still image of Anderson's teaching, because it would allow an operator is able to view a close-up location in the zoom window (col. 2, lines 17-18).

Claim 10, the rationale provided in the rejections of claims 3 and 9 are incorporated herein.

Claim 11, the rationale provided in the rejection of claim 3 is incorporated herein. In addition, Martin teaches prompting the user manually (instruction how to select the

image portions) to select an option in a sub-level (col. 10, lines 21-23). Martin does not teach selecting an option in a sub-level; however, Martin teaches selecting image portions (col. 9, lines 37-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the selecting image portions as taught by Martin's teaching, because it would allow a user may take control of the tour of the displayed image and explore the image on his own (col. 3, lines 42-43).

Claim 13, Anderson et al. discloses the image data is representative of a displayable photograph (capturing high quality static photographs; col. 1, lines 36-37).

7. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (6,587,119) in view of Martin et al. (6,256,061), Lau et al. (6,633,309) and further in view of Madrane (6,573,907).

Claim 4, Anderson does not teach an order of index frame; however, Madrane discloses determining the order of index frames to be displayed (col. 1, lines 62-64; figs. 3, 4); the amount of time for each index frame, the transition between each index frame (col. 1, lines 27-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the order of index frame as taught by Madrane into the method of defining the key frame's position onto the still image of Anderson's teaching, because it would develop in the fields of video indexing and video editing (col. 1, lines 62-64).

Claim 14, Anderson does not teach the initial and end frames representing salient parts of the image; however, Madrane discloses the data is representative of panning motion, the initial and end frames representing salient parts of the image

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(salient still; col. 3, lines 38-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the salient still as taught by Madrane into defining a panning and zooming path across a still image of Anderson's system for provide a salient still of the video sequence, because it would provide a composite image called salient still, representative of the video sequence (col. 3, lines 51-53).

8. Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (6,587,119) in view of Martin et al. (6,256,061), and further in view of Foote et al. (6,404,925).

Claims 5, 6, Anderson does not teach performing a feature recognition identifies human facial features; however, Foote et al. discloses identifying regions of interest (col. 24, lines 45-47) and performing a feature recognition identifies human facial features, index frame based on a close-up view of identified facial features (col. 20, lines 35-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the region of interest as taught by Foote into the method of defining the key frame's position onto the still image of Anderson's teaching, because selecting video regions that allows visualizing as well as supporting non-contiguous selection (col. 24, lines 31-33).

9. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (6,587,119) in view of Martin et al. (6,256,061), and further in view of Foote et al. (6,404,925) and Terashita et al. (5,128,711)

Claim 7, Anderson does not teach a database of pre-stored facial features for facial features already present in the database; however, Terashita et al. comparing the facial features with a database of pre-stored facial features for facial features already present in the database (col. 2, lines 55-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate comparing the facial feature as taught by Terashita into the key frame's position onto the still image of Anderson's teaching, because it would detect correctly facial image without requiring a difficult operation (col. 2, lines 60-62).

Claim 8, Anderson et al. determining the orientation of the facial features, generating a display path (path of panning) which follows the general gaze direction which the facial features exhibit (col. 5, lines 42-52; fig. 4B).

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (6,587,119) in view of in view of Martin et al. (6,256,061), and further in view of Lau et al. (6,633,309) and Uchihachi et al. (6,535,639).

Claim 12, Anderson does not teach generating video data of video sub-clips; however, Uchihachi et al. discloses generating video data of video sub-clips (video was divided into 69 segments or shots), each sub-clip representing displayable motion over a different part of the static image, editing for linking the sub-clips to form a second set of video data (col. 4, line 65 through col. 5, line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate video sub-clip as taught by Uchihachi into defining a panning and zooming path across a still image of

Anderson's system, because it would create segments (video clip) from the same cluster ID (abstract).

11. Claims 22, 25, 26, 28, 30-33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (6,587,119) in view of in view of Martin et al. (6,256,061), and further in view of Alsing et al. (6,362,850).

Claims 22, 26, 28, 30-33 and 36, Anderson et al. teaches displaying the generated video data (col. 6, lines 20-30); Anderson does not teach displaying the static image with the index frame; however, Alsing et al. teaches displaying the static image with the index frame (col. 9, lines 22-23); displaying the display path (col. 9, lines 35-38); receiving an instruction for a user selecting a rate of the movement between the index frames (frame rate); determining a nature of transition between the index frames, the transition corresponding to the selected rate of movement (col. 4, lines 47-61; col. 6, lines 1-7); determining a geometry of a scene of the static image; determining the order of the display of index frames by following the determined geometry of the scene (figs 4, 5 and 7); display selecting smaller index frame; zooming on the selected index frame to increase display sized of the index frame; selecting larger index frame; zooming-out on the selected index frame to increase display sized of the index frame (col. 5, lines 35-42); displaying the static image by zooming out from a last index frame after the last index frame displayed (col. 5, lines 43-53); determining a time period for display index frames, the time period predefined for the computer program (col. 6, lines 40-45); displaying index frames for the predetermined time period before moving to a next index frame (col. 9, lines 35-38; col. 10, lines 15-18); recognizing an object around which the

index frames are located (fig. 4B); determining the order by fitting the index frames to a trapezoid such that the direction of display is around the recognized object (the path of panning across image shown by arrows; col. 5, lines 20-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the displaying the image frame taught by Alsing into the method of defining a panning and zooming path of Anderson for displaying digital images, because it would provide a method for interactively creating a movie from a still image in a digital imaging device that includes a display screen (col. 1, lines 61-62).

Claim 25, Anderson et al. teaches receiving an instruction for a user selecting a zoom of index frames; determining a size of display of the selected index frames corresponding to the selected zoom (allowing the user to define the position of a plurality of key frames on the still image, allowing the user to size the key frames to control the zoom, to fix each of the key frame's position and size; col. 2, lines 2-7).

Allowable Subject Matter

12. Claims 23, 24, 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach receiving an instruction for a user deleting index frames, determining a second order of display of index frames such that the deleted

index frame is not displayed; receiving an instruction for a user changing the order of the display of index frames; determining a second order of index frames corresponding to the changed order; detecting a direction of gaze of person in a scene of the static image, wherein the person is gazing at an object of interest shown on the static image; determining the order of display by displaying an index frame corresponding to the person and displaying the object of interest where the direction of gazer of the person is directed at.

Response to Arguments

13. With respect to applicant's arguments, the feature: "determining a display path following the at least dominant edge, line or curve" taught by either Anderson or Alsing, because in fig. 4 displaying a path of zooming and panning across the image (moving) is determined, the camera generates image frames along the path between each adjacent pair of key frames, such that when the sequence of frames is displayed at regular time intervals, it appears similar to a panning motion picture. The arguments of claim 15 was not persuasive because the claim recited that: A computer program stored in a computer-usable medium, the computer program comprising compute-readable instructions for causing the computer to execute the steps of; however, this preamble also taught by Anderson in col. 11, lines 37-40 such as a computer-readable medium containing program instructions, and it is obvious in the art to use computer program to automatically perform any of the recited features of the claim.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

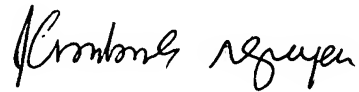
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 16, 2004

A handwritten signature in black ink, appearing to read "Kimbinh Nguyen".

Kimbinh Nguyen

Patent Examiner AU 2671